GPSC established rates consistent with, and in some instances below, forward-looking costs for xDSL-related elements. BellSouth will discuss each of those proceedings in turn.

i. The GPSC Proceeding Setting Forward-Looking Rates for Individual Network Elements

The GPSC adopted TELRIC-compliant rates for access for most individual network elements – including loops and switching – through its December 16, 1997 *Order Establishing Cost-Based Rates*[43] in Docket No. 7061-U. In the course of that proceeding, the GPSC established a workshop so that CLECs could be fully informed as to how BellSouth produced its cost studies and could raise questions and concerns that they had as to that study. *See Order Establishing Cost-Based Rates* at 10; *Caldwell Aff.* ¶ 94. The GPSC then gave the CLECs extensive additional opportunities to participate in the GPSC's decision-making. The GPSC held a full week of live hearings at which parties could present and cross-examine witnesses. *See Order Establishing Cost-Based Rates* at 10. CLECs were also allowed to conduct depositions and to propound data requests. *Id.* BellSouth submitted cost studies supporting its requested rates, as did AT&T and MCI, and BellSouth's witnesses were subjected to extensive cross-examination. *Id.*

Throughout the proceeding, the GPSC emphasized its commitment to forward-looking rates. In establishing the proceeding, the GPSC stated that the appropriate cost methodology "should be forward-looking, consistent with the [TELRIC] approach." *Id.* at 11 (citing prior order). Accordingly, "BellSouth was required to submit its filing using a TELRIC methodology"

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[43] Order Establishing Cost-Based Rates, *Review of Cost Studies, Methodologies, and Cost-Based Rates for Interconnection and Unbundling of BellSouth Telecommunications Services*, Docket No. 7061-U (Ga. Pub. Serv. Comm'n Dec. 16, 1997) (App. G – Ga., Tab 20).

and to "provide comprehensive and complete work papers that fully disclose and document the process underlying the development of each of its economic costs." *Id.* at 11 & n.7.

BellSouth's cost studies complied with those requirements. As explained in detail in the affidavit of Daonne Caldwell, BellSouth's studies were rigorously forward-looking. For instance, to establish the recurring cost of a network element, BellSouth would, after defining the proper element, determine (1) the forward-looking architecture, engineering, and provisioning procedures required to provide the functionality; (2) the most efficient material and equipment available to provide each unbundled network element, as well as the associated cost; (3) the forward-looking costs associated with installing the material or equipment; and (4) the carrying charges and operating expenses associated with the installed investment, as well as the forward-looking shared and common costs. *Caldwell Aff.* ¶ 31; *see also id.* ¶¶ 39-59, 77-83, 85-90 (discussing specific BellSouth forward-looking models).

BellSouth followed a similar forward-looking methodology to determine appropriate nonrecurring costs. *Id.* ¶¶ 32-35. BellSouth measured all of the one-time costs associated with provisioning and installing a network element "on a forward-looking basis using the most efficient technology and practices available." *Id.* ¶ 32.

The result of the GPSC's review of these studies as well as the rest of the extensive hearing record was a full set of TELRIC rates. The GPSC set forward-looking recurring and nonrecurring rates for unbundled local loops, unbundled local and tandem switching, unbundled transport facilities, signaling, and numerous other network elements and capabilities. *See Order Establishing Cost-Based Rates*, App. A (listing rates); *Caldwell Aff.* ¶¶ 92-100.

Moreover, although the GPSC properly adopted BellSouth's studies – not the Hatfield Model sponsored by AT&T and MCI – as an appropriate starting point for determining those

forward-looking rates, it altered several crucial inputs. The GPSC set BellSouth's cost of capital at 9.27%, a figure that is *substantially* lower than the cost of capital that this Commission has found consistent with section 271 approval. *See Order Establishing Cost-Based Rates* at 27; *Massachusetts Order* ¶ 38 (expressing concern, but finding checklist compliance, where cost of capital was 12.16%). Additionally, the GPSC raised BellSouth's fill factors for copper loops by 5%, resulting in a 48% fill factor for copper distribution and a 69.5% fill factor for copper feeder. *See Order Establishing Cost-Based Rates* at 34. Finally, at the suggestion of AT&T and MCI, the GPSC significantly altered the depreciation rates employed in BellSouth's model to adopt the plant lives and depreciation rates established for Georgia by this Commission. *See Order Establishing Cost-Based Rates* at 28; *Kansas/Oklahoma Order* ¶ 76 (finding use of this Commission's depreciation factors "reasonable").

These three GPSC-ordered changes substantially reduced the already-forward-looking rates that BellSouth had proposed. For instance, these changes, along with others, lowered BellSouth's recurring 2-wire analog loop rate by nearly $4.00, leading to a rate of $16.51 before deaveraging.[44] *See Caldwell Aff.* ¶ 95.

The GPSC similarly approved forward-looking non-recurring rates. While those rates were based on BellSouth's forward-looking studies, the GPSC adjusted BellSouth's studies by "removing BellSouth's assumed shared cost associated with direct labor rates" and deleting "the disconnection charges from the non-recurring service order charges." *Order Establishing Cost-*

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[44] In a subsequent order, the GPSC properly adopted as consistent with the 1996 Act a stipulation between BellSouth, AT&T, MCI WorldCom, and others establishing deaveraged rates. *See Caldwell Aff.* ¶¶ 115-116.

Based Rates at 5; *Caldwell Aff.* ¶ 100. The result is, again, a set of rates that are consistent with this Commission's requirements.

Despite all these facts, opponents of this Application are likely to claim that this Commission should repudiate the considered judgment of the GPSC. Those parties may argue that the BellSouth loop study is improper because it relied on a statistical sample of existing loops and thus used existing loop routes. As Daonne Caldwell explains in her affidavit, that claim is meritless. Not only have all nine state commissions in BellSouth's region found this BellSouth method acceptable, but also BellSouth specifically demonstrated to the GPSC in its cost proceeding that maintaining existing cable routes would produce *lower* costs than the alternate method championed by AT&T and MCI WorldCom; BellSouth's study thus satisfied the "least-cost" requirement of this Commission's rules. *See id.* ¶¶ 54-59.

That point is driven home by the joint affidavit of Jamshed Madan and Michael Dirmeier from the Georgetown Consulting Group. That affidavit demonstrates that, if the GPSC had adopted the AT&T/MCI model, the average loop length would have been 10.9% *longer* than under BellSouth's model. *Madan/Dirmeier Joint Aff.* ¶¶ 20-24 (App. A, Tab N). Even more to the point, the affidavit demonstrates in detail that the loop rate set by the GPSC is significantly *lower* than the rate that would have resulted if inputs consistent with those adopted by the GPSC were put into the Hatfield Model. *See id.* ¶¶ 3-16, 25-32 ("If the [Georgia] Commission had adopted those same inputs, but applied the AT&T/MCI model, it would have adopted a greater loop rate than it did."). Complaints about the BellSouth study are, accordingly of no practical significance. Thus, even if there were "certain flaws in [the BellSouth] cost study" – which, in fact, there were not – the Georgia rates are nevertheless within "the reasonable range that a

correct application of . . . TELRIC rules would produce" and create no legitimate issue. *Kansas/Oklahoma Order* ¶ 81.

Similarly, although the long-distance incumbents may complain that the GPSC relied on a BellSouth study that did not include IDLC loops in costing unbundled loops, that decision is both correct and, in the end, only of academic interest. The decision is correct because, in this proceeding, the GPSC was determining the costs of loops *uncombined* with other network elements. Since IDLC loops cannot be separated from the switch, they were not suitable for that purpose. *See Caldwell Aff.* ¶ 51. By contrast, in a separate proceeding (discussed below), in which the GPSC determined rates for combinations of network elements, IDLC loops were included in the study submitted by BellSouth and utilized by the GPSC. *See id.* ¶ 52. In any event, this issue is of no practical importance. The AT&T/MCI WorldCom Hatfield Model incorporated IDLC loops, but nevertheless would have resulted in higher rates and longer loop lengths than BellSouth's study. *See Madan/Dirmeier Joint Aff.* ¶¶ 17-19.

There is also no basis to attack the forward-looking switching rates established by the GPSC. Those rates are based on well-established models, including the Telcordia Switching Cost Information System ("SCIS") model. *See Caldwell Aff.* ¶¶ 77-83, 85-88. BellSouth, moreover, consistently used forward-looking inputs in that model, including an appropriate mix of new and growth switch purchases. *See id.* ¶ 85; *Massachusetts Order* ¶ 33 (rejecting argument based on claim that more new switches, and thus larger switch discounts, should be assumed); *New York Order* ¶¶ 245-246 (same).

ii. The GPSC Proceeding Setting Forward-Looking Rates for Access to UNE Combinations

In May 1999, the GPSC established an additional cost docket to set rates for combinations of network elements, including the combinations that are commonly used in the

UNE Platform and the EEL. Again, the GPSC proceeded only after obtaining a full record, including cost studies backed up by "comprehensive and complete work papers that fully disclosed and documented the process underlying the development of each of the economic costs" and "clearly and logically represent all data used in developing each cost estimate." *Combinations Pricing Order*[45] at 3. The GPSC then held another live hearing in which BellSouth witnesses were subject to cross-examination. *Id.* at 4.

Although the GPSC adopted BellSouth's forward-looking cost model over the Hatfield Model, it again ordered the same significant changes to BellSouth's cost of capital, depreciation, and fill factor inputs that were discussed above. *Id.* at 18. The GPSC then went even further by, among other things, adjusting the model so that 98% of DLC loops were served by IDLC (as opposed to the 49% proposed by BellSouth). *Id.* at 19.

As a result of these and other adjustments, and the forward-looking nature of BellSouth's original study, the combination rates established by the GPSC are reasonable and lawful under any standard. *See id.* Attach. A (listing rates); *Caldwell Aff.* ¶¶ 101-113. The GPSC set the recurring rate (before deaveraging) for a 2-wire loop-port combination at $14.34, and a similarly low $2.01 nonrecurring rate. *Id.* ¶¶ 106-107.[46]

iii. The GPSC's Proceeding To Set Forward-Looking xDSL Rates

Finally, the GPSC convened a proceeding to establish and review recurring and nonrecurring rates for xDSL-related facilities. The GPSC once again held a live hearing at

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[45] Order, *Generic Proceeding to Establish Long-Term Pricing Policies for Unbundled Network Elements*, Docket No. 10692-U (Ga. Pub. Serv. Comm'n Feb. 1, 2000) (App. I – Ga., Tab 7).

[46] BellSouth has also submitted forward-looking cost studies to support its proposed rates for new UNEs created by this Commission's *UNE Remand Order*. *See id.* ¶ 114. The GPSC approved BellSouth's SGAT containing those rates on October 2, 2001.

which CLECs participated. The GPSC further required BellSouth to submit detailed, forward-looking studies to support its proposed rates. *See* Order at 1-2, *Investigation of BellSouth Telecommunications, Inc.'s Provision of Unbundled Network Elements for the xDSL Service Providers*, Docket No. 11900-U (Ga. Pub. Serv. Comm'n June 11, 2001) ("*xDSL Order*") (App. K – Ga., Tab 11). BellSouth again used the forward-looking cost models that the GPSC had approved in prior proceedings and included the modifications that the GPSC had previously ordered. *See Caldwell Aff.* ¶¶ 123-126.

As to some issues (including the appropriate forward-looking rates for non-designed xDSL loops), the GPSC approved a negotiated settlement that BellSouth reached with Covad and other data providers. *See xDSL Order* at 2. As to other issues, the GPSC again substantially altered the results of BellSouth's cost studies in a manner that removes any doubt that the results are consistent with (in fact, below) forward-looking costs. *See id.* at 3-12; *Caldwell Aff.* ¶¶ 117-120. Among other things, the GPSC set loop conditioning rates at $0 for an 18-month period, and substantially reduced BellSouth's nonrecurring rates, which should moot any concerns that CLECs had raised about those rates. *See xDSL Order* at 4, 7. The GPSC further ordered that BellSouth conduct new time and motion studies that could be reviewed in the GPSC's next generic pricing docket, *see id.* at 7, which, as noted above, has already commenced. BellSouth has done those studies under the direction of a statistician, and on October 1, 2001, submitted them to the GPSC in its new docket. *See Caldwell Aff.* ¶ 120.

b. Louisiana

The Louisiana PSC adopted new UNE rates for BellSouth in an order in Docket No. U-24714 that was issued on September 21, 2001. As with the GPSC's pricing decisions, that order was the culmination of a proceeding in which the Louisiana PSC repeatedly stressed its commitment to forward-looking TELRIC pricing, and in which the LPSC received significant

CLEC input in the form of pre-filed testimony, live direct testimony and cross-examination, and post-hearing briefs. *See* Recommendation of the Administrative Law Judge at 4, *Final Deaveraging of BellSouth Telecommunications, Inc. UNE Rates*, Docket No. U-24714(A) (La. Pub. Serv. Comm'n Sept. 10, 2001) ("*Recommended UNE Rate Decision*") (App. F – Ga., Tab 39). And, as in Georgia, the result is a full set of TELRIC-compliant rates.

Indeed, while some parties to the Louisiana proceeding challenged the inputs and assumptions included in BellSouth's model, *no* party to that proceeding challenged the use of BellSouth's cost models to establish rates. *See id.* at 9. There is a good reason for that: BellSouth again relied on rigorously forward-looking studies. As Daonne Caldwell explains in her affidavit, each of the cost models that BellSouth employed in the Louisiana proceeding comports with the principles established by this Commission's TELRIC rules. *See Caldwell Aff.* ¶¶ 60-76, 84-88, 91, 123-129. In this very recent proceeding, BellSouth used somewhat different forward-looking cost models than in the earlier Georgia proceedings – for instance, relying on the BellSouth Telecommunications Loop Model© ("BSTLM"), instead of the loop sample that was employed in Georgia. The use of these new models in no way casts doubt on the validity of those previous studies. Rather, the new models are simply improvements. The new loop model, for instance, can be used for more purposes, and is less labor intensive. *See id.* ¶ 60; *see also id.* ¶¶ 73-76 (explaining why the few CLEC criticisms of BellSouth's method of using that model lack merit).

Moreover, as in Georgia, although the Louisiana PSC adopted BellSouth's cost studies, it altered key inputs in a way that significantly lowered the ultimate rates, erasing any conceivable doubt that inputs fall within a reasonable range. Among other things, the LPSC adopted the ALJ's decision to require the use of depreciation lives that are at the lower range of those that

this Commission has employed; set a 10.09% cost of capital; and reduce the amount of support structure that could be assumed. *See Recommended UNE Rate Decision* at 22-23, 27, 30; *Caldwell Aff.* ¶¶ 11-13. The LPSC similarly adopted the ALJ's conclusion to establish fill factors of 74% for copper feeder cables and 41% for distribution cables. *See Recommended Decision* at 31; *Massachusetts Order* ¶ 39. The LPSC also adopted the ALJ's recommendation to reduce nonrecurring costs by 50%. *See Recommended UNE Rate Decision* at 56. With regard to switching, the LPSC rejected BellSouth's proposal to establish stand-alone rates for vertical features. The LPSC concluded that "the features cost recognized by Staff should be incorporated into the per minute of use switching rate, thus zeroing out any stand alone features charge." Order at 10, *Final Deaveraging of BellSouth Telecommunications, Inc. UNE Rates*, No. U-4714(A) (Ga. Pub. Serv. Comm'n Sept. 21, 2001) (App. F, Tab 40).

The result is, again, a full set of forward-looking UNE rates – indeed, those rates are significantly below those which BellSouth believes properly account for forward-looking TELRIC costs. Not only are these rates generally lower than those that DOJ previously found to be "[i]n most respects . . . consistent with . . . pro-competitive pricing principles"[47]; the new LPSC decision resolves each of the three pricing issues that DOJ raised in that prior proceeding. *See Caldwell Aff.* ¶¶ 128-129. More specifically, BellSouth now has deaveraged TELRIC loop rates; it has cost-based collocation-space-preparation rates; and, in contrast to the $8.28 vertical feature rate to which DOJ objected, vertical features are now incorporated into the end office switching rate of $.001868, which is still lower than the switching rate previously presented to this Commission ($.002100). *See id.*

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[47] Evaluation of the United States Department of Justice at 19 n.37, *Second Application by BellSouth Corp., et al. for Provision of In-Region, InterLATA Services in Louisiana*, CC

4. Nondiscriminatory Access to OSS

The Commission has found that nondiscriminatory access to an incumbent's OSS – so that CLECs can formulate and place orders for network elements or resale services, install service to their customers, maintain and repair network facilities, and bill customers – is a prerequisite to the development of meaningful competition. *See Kansas/Oklahoma Order* ¶ 104. OSS include the systems, information, and personnel that support network elements or services offered for resale. *Connecticut Order*[48] App. D ¶ 26.

The Commission has articulated the legal standard by which it evaluates the sufficiency of a BOC's OSS. First, it determines whether the BOC has "deployed the necessary systems and personnel to provide sufficient access to each of the necessary OSS functions and whether the BOC is adequately assisting [CLECs] to understand how to implement and use all of the OSS functions available to them." *Id.* App. D ¶ 30 (internal quotation marks omitted). Next, it determines whether the OSS functions that the BOC has deployed are "operationally ready," as a practical matter. *See id.* For OSS functions with a retail analog, the BOC must provide access sufficient to permit CLECs to perform these functions in "substantially the same time and manner" as the BOC. *Id.* App. D ¶ 28 (internal quotation marks omitted). For other OSS functions, the BOC must offer access "sufficient to allow an efficient competitor a meaningful opportunity to compete" as measured by the BOC's performance under the applicable performance standards. *Id.* App. D ¶ 29 (internal quotation marks omitted).

Docket No. 98-121 (FCC filed Aug. 19, 1998).

[48] *See* Memorandum Opinion and Order, *Application of Verizon New York, Inc., et al., for Authorization to Provide In-Region, InterLATA Services in Connecticut*, CC Docket No. 01-100, FCC 01-208 (rel. July 20, 2001).

To determine whether a BOC has met the legal standard for each OSS function, a BOC first "must demonstrate that it has developed sufficient electronic (for functions that the BOC accesses electronically) and manual interfaces to allow competing carriers equivalent access to all of the necessary OSS functions." *Id.* App. D ¶ 31. Evidence relevant to meeting this standard includes the provision of specifications necessary for CLECs to build systems to communicate with the BOC's systems; disclosure of internal business rules and formatting information to ensure the CLEC's orders are processed efficiently; and proof of sufficient capacity to accommodate both current demand and projected demand for competing carrier's access to OSS functions. *See id.*

Second, the Commission will examine evidence of commercial readiness to determine whether the BOC's OSS are handling current demand and will be able to handle reasonably foreseeable future volumes. The Commission has repeatedly emphasized in this regard that "[t]he most probative evidence that OSS functions are operationally ready is actual commercial usage." *Id.* App. D ¶ 32. In the absence of commercial usage, the Commission will consider carrier-to-carrier testing, independent third-party testing, and internal testing, to demonstrate commercial readiness. *See id.* Moreover, as discussed below, the Commission may also consider regional data in appropriate circumstances.

a. Regionality

Consistent with this Commission's precedents, BellSouth relies primarily on strong evidence of commercial usage in both Georgia and Louisiana to support this Application. Indeed, in BellSouth's view, this Application should be granted as to each state on that basis alone. It is also true, however, that, because BellSouth provides access to checklist items on a region-wide basis, this Commission may rely on Georgia performance and the Georgia third-

party test to support the Louisiana Application; by the same token, it can rely on Louisiana performance to support the Georgia Application. *See Second Louisiana Order* ¶ 56.

As the Louisiana PSC properly concluded in adopting its Staff's recommendation, "BellSouth has provided substantial evidence . . . either that there is a shared use of a single OSS, or, [where] it relies in part on separate systems, that the OSS can be reasonably expected to behave the same in all states." *LPSC Staff Final Recommendation* at 40. This finding confirms what this Commission has previously recognized – that BellSouth uses essentially the same OSS throughout its entire region. *See Second Louisiana Order* ¶ 88; *see also South Carolina Order*[49] ¶ 97; *Kansas/Oklahoma Order* ¶ 38. *See also, e.g., Stacy Aff.* ¶¶ 657-689; *Ainsworth Aff.* ¶¶ 5-6 (App. A, Tab A); *Scollard Aff.* ¶¶ 32, 43-46 (App. A, Tab 5); *Heartley Aff.* ¶¶ 3-47 (App. A, Tab I).

In the *Kansas/Oklahoma Order*, the Commission set forth criteria for determining whether OSS evidence from other states is relevant. *See Kansas/Oklahoma Order* ¶ 110. As to electronic OSS processes, a BOC may demonstrate "sameness" by showing that CLECs either use the identical system across different states or that CLECs use separate systems that "reasonably can be expected to behave the same way." *Id.* ¶ 111. As to manual processes and personnel, the Commission has emphasized evidence showing that those components operate pursuant to a common organizational structure, common methods and procedures, and common training. *See id.* ¶ 113. Where the systems are separate, BellSouth must demonstrate that its OSS reasonably can be expected to behave the same way. In short, the Commission has defined "same" to mean that "competing carriers in [multiple states] share the use of a single OSS . . .

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[49] Memorandum Opinion and Order, *Application of BellSouth, et al., Pursuant to Section 271 of the Communications Act of 1934, as Amended, To Provide In-Region, InterLATA Services*

[consisting of] a common set of processes, business rules, interfaces, systems and, in many instances, even personnel." *Id.* ¶ 111. As the Louisiana PSC properly found in adopting its Staff's recommendation, BellSouth meets each of these criteria. *See LPSC Staff Final Recommendation* at 37-43.

Electronic Interfaces. BellSouth provides CLECs with the same set of electronic interfaces for all CLEC resale and UNE service requests throughout BellSouth's nine-state region – all of which provide nondiscriminatory access to BellSouth's OSS. *See Stacy Aff.* ¶ 659; *LPSC Staff Final Recommendation* at 40. A CLEC in Louisiana or Georgia uses the same electronic interfaces for access to the same BellSouth OSS as a CLEC in any other state in BellSouth's region. *See Stacy Aff.* ¶ 659. To the extent that there are separate servers for processing CLEC requests via these interfaces, these servers use the same type of hardware running the same programming code, and are designed to operate in a manner indistinguishable from each other. *See id.* ¶ 660; s*ee also Kansas/Oklahoma Order* ¶ 111.

BellSouth's pre-ordering and ordering interfaces for CLECs are the same across its nine-state region. *See Stacy Aff.* ¶¶ 663-668. CLECs that choose to use BellSouth's machine-to-machine interfaces (TAG or EDI) do not need to build discrete interfaces for each state in BellSouth's region – once a CLEC has constructed its side of the pre-ordering or ordering interface, the CLEC can use that interface to submit LSRs for end users in any or all states in BellSouth's region. *See id.* ¶ 663. BellSouth's side of the gateway consists of a single system that receives LSRs for the CLECs' end users in any of BellSouth's nine states. *See id.*; *see also*

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in South Carolina, 13 FCC Rcd 539 (1997).

Kansas/Oklahoma Order ¶ 112 n.312. Moreover, BellSouth's human-to-machine interface (LENS) is the same in all BellSouth states.[50] *See Stacy Aff.* ¶ 663.

When using the CLEC Service Order Tracking System ("CSOTS") to obtain provisioning information, CLECs use the same procedure for accessing a list of service orders for Louisiana end users that they would for end users in Georgia, or in any other state in BellSouth's region. *See id.* ¶ 669. And if the CLEC does business in several states in the region, it can retrieve a single list of service orders for its end users in those states. *See id.*

With respect to maintenance and repair functions, both of BellSouth's interfaces (TAFI and ECTA) are regional in nature. *See id.* ¶ 670. CLECs may use either interface for end users in any of the states in BellSouth's region. *See id.* If a CLEC chooses to use the machine-to-machine ECTA interface, it needs only to build one interface to BellSouth's ECTA gateway, which can then be used for any of the states in the region. *See id.* Similarly, the TAFI interface is the same across all states in BellSouth's region. *See id.* Moreover, provisioning, maintenance, and repair for CLEC orders are provided by BellSouth using the same processes, procedures, personnel and systems utilized in Georgia and Louisiana, as well as across all nine states in BellSouth's region.[51] *See Heartley Aff.* ¶¶ 3-47. For example, BellSouth personnel performing

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[50] Regardless of the CLEC's location, all transaction queries, such as the pre-ordering queries sent by the CLEC via the electronic interfaces, for example, result in BellSouth's OSS returning the same information, and in the same format, for end users residing in any one of the nine states in BellSouth's region. *See Stacy Aff.* ¶ 664.

[51] With respect to basic central office provisioning functions, such as the inventory/assignment of originating equipment, telephone numbers and tie pairs, BellSouth is currently in the process of upgrading its systems from the Computer System for Mainframe Operations ("COSMOS") to the SWITCH System. *See Heartley Aff.* ¶¶ 21-22. Unlike COSMOS, SWITCH has the ability to assign and manage telephone numbers in a telephone number pooling environment. *See id.* ¶ 22. COSMOS and SWITCH provide the same provisioning functionality, however, and the change from one to the other is transparent to CLECs. *See id.* The conversion to SWITCH has been completed in Florida, Tennessee, Georgia

field work activities for CLEC orders access the same systems, and utilize the same processes, in all nine states in BellSouth's region. *See, e.g., id.* ¶¶ 3-4. Moreover, BellSouth has a common organizational structure for these functions. *See, e.g., id.* ¶ 5.

Manual Interfaces. As explained in the affidavit of Kenneth Ainsworth, the various BellSouth centers that support CLEC manual pre-ordering, ordering, provisioning, and maintenance activity all operate on a regional basis. *See, e.g., Ainsworth Aff.* ¶¶ 5-6; *see also Stacy Aff.* ¶ 659; *LPSC Staff Final Recommendation* at 40-41. That is, each of these centers is organized based on functionality rather than geography, and utilize the same methods and procedures, access the same databases, and employees receive the same training in support of CLECs across all nine states in BellSouth's region. *See, e.g., Ainsworth Aff.* ¶¶ 5-6. Thus, for example, the BellSouth center that provides manual processing (known as the Local Carrier Service Center or "LCSC") for a CLEC seeking to provide service to customers in Georgia is the very same center that provides manual processing for that same CLEC when it is seeking to provide service in Louisiana or any other BellSouth state. *See id.* ¶ 8. Put differently, a CLEC is assigned to the same LCSC for all its orders from all BellSouth states. *See id.* ¶¶ 8-16.

One insubstantial difference does exist in BellSouth's service order generation systems. *See id.* ¶¶ 50-51. Once an LSR is received by the LCSC, a service representative enters the LSR into one of BellSouth's two service order generation systems, DOE or SONGS, depending on the states from which the order arises.[52] *See Ainsworth Aff.* ¶ 50. Both DOE and SONGS are input

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and North Carolina, with Louisiana scheduled to be completed by February 2002. *See id.* Moreover, at the time KPMG conducted its third-party test in Georgia, BellSouth had not yet begun the conversion from COSMOS to SWITCH. *See id.*

[52] The Direct Order Entry ("DOE") system is used for orders in Georgia, as well as in Florida, North Carolina, and South Carolina, while the Service Order Negotiation System

software programs used to provide the BellSouth Service Order Control System ("SOCS") with data necessary to generate service order requests. *See id.* ¶¶ 51, 55. As explained in more detail below, however, a third-party audit confirmed that there are no material differences in performance or functionality between DOE and SONGS. *See id.* ¶ 51; *Stacy Aff.* ¶¶ 679-687.

BellSouth has also produced and published a regional set of business rules, guides, procedures, information, and job aids for CLECs. *See Stacy Aff.* ¶ 661. This information is used by CLECs – regardless of their locations in BellSouth's region – to educate, inform, and assist in the configuration of CLEC systems that will interface with BellSouth's regional OSS. *See id.* For example, business rules for pre-ordering and ordering are provided in BellSouth's regional "BellSouth Pre-Order Business Rules and BellSouth Business Rules for Local Ordering." *See id.* BellSouth does not provide separate documents for different states in its region, nor does it include separate sections or pages that apply to specific states within the business rules. *See id.* In addition, BellSouth's training programs for CLECs are conducted on a regional basis and are the same for all CLECs for all interfaces and forms, regardless of the states in which the CLECs serve end users.[53] *See Stacy Aff.* ¶ 662.

Third-Party Regionality Audit. BellSouth engaged PricewaterhouseCoopers ("PwC") to examine BellSouth's assertions on the regionality of its OSS. *See id.* ¶ 675. PwC's examination was conducted in accordance with "attestation standards" established by the American Institute

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("SONGS") is used for orders in Louisiana, as well as in Kentucky, Alabama, Mississippi, and Tennessee. *See Ainsworth Aff.* ¶ 50.

[53] In state 271 proceedings, CLECs have argued that if the performance from state to state is different, then the processes must be different as well. This argument ignores the fact that numerous other factors beyond BellSouth's control and unrelated to the actual OSS processes can cause differences in overall performance from state to state. Such other factors may include the weather, topology, customer preference, or local regulations governing such processes as excavation. *See Heartley Aff.* ¶¶ 33-38.

of Certified Public Accountants ("AICPA"). *See id.* ¶ 675 & Exh. OSS-86, ¶ 5 (affidavit of Robert Lattimore). An "attestation examination" occurs when a practitioner, such as PwC, is engaged to issue a written communication that concludes whether the written assertion of another party, such as BellSouth, is reliable. *See id.* & Exh. OSS-86, ¶ 5. Under the AICPA attestation standards, an attestation examination is the highest level of assurance that can be provided on an assertion and, if positive, results in an opinion by PwC that the assertions presented are fairly stated in all material respects.[54] *See id.* ¶ 675 & Exh. OSS-86, ¶ 5. The scope and methodology of PwC's audit were thorough and intensive – representing thousands of hours of work by PwC. *See id.* & Exh. OSS-86, ¶ 4.

PwC validated BellSouth's assertions. First, PwC validated that BellSouth uses the same pre-ordering and ordering OSS throughout its nine-state region to support wholesale CLEC activity.[55] *Id.* ¶ 677 & Exh. OSS-86, ¶ 6. In reaching this conclusion, PwC examined several factors, including the consistency of applications and technical configurations used to process pre-ordering and ordering transactions in BellSouth's region, as well as the consistency of documentation of systems and processes in BellSouth's LCSCs. *See id.* ¶ 677 & Exh. OSS-86, ¶ 7. Second, PwC validated that BellSouth's DOE and SONGS systems have no material

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[54] BellSouth closely modeled its attestation request on SWBT's Five State Regional OSS Attestation Examination. Because this model was successfully used by SWBT, BellSouth has used it as a roadmap to establish the same burden of proof. *See Stacy Aff.* ¶ 676. The only difference between the attestation examinations of SWBT and BellSouth is that BellSouth added a second assertion to confirm that there are no material differences in functionality and performance between DOE and SONGS. *Id.* & Exh. OSS-87.

[55] PwC defined "sameness" as (1) having identical applications and interfaces implemented and available across the nine-state region, with "identical" meaning a unique set of software coding and configuration ("version") installed on either one or multiple computer servers ("instances") that support all nine states in an equitable manner; and (2) having processes, personnel, and work center facilities consistently available and employed across the

differences for service order entry by the LCSCs.[56] *See Stacy Aff.* ¶ 679 & Exh. OSS-86, ¶ 6. PwC examined both the functionality and performance of DOE and SONGS in finding no material differences between the two systems. *See id. See also Ainsworth Aff.* ¶ 51. Overall, PwC's attestation provides strong support for the regionality of BellSouth's OSS. *See LPSC Staff Final Recommendation* at 41.

b. Independent Third-Party Testing

In addition to actual performance evidence, which is discussed in detail below, BellSouth has also demonstrated compliance through an independent third-party test. That test was conducted in Georgia, but also supports the Louisiana Application because, as discussed above and found by PwC, BellSouth's systems are regional. *See Kansas/Oklahoma Order* ¶ 118 (noting that use of third-party data from another state as additional evidence is a "sensible and efficient approach that can avoid the delay and expense of redundant testing") (internal quotation marks omitted).

As the Louisiana PSC confirmed, KPMG, acting under the direction of the Georgia PSC, subjected BellSouth's OSS to an intensive and thorough independent third-party test, supervised by the Georgia PSC. *LPSC Staff Final Recommendation* at 39; *Stacy Aff.* ¶ 10. *See New York Order* ¶¶ 10, 100 (noting that "rigorous, comprehensive third party testing" by KPMG provided "persuasive evidence of Bell Atlantic's OSS readiness"). Using a military-style "test until you

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nine-state region with no significant aspects of those resources providing a greater service level or benefit in one state than in other states in the region. *See Stacy Aff.* ¶ 654 & Exh. OSS-86, ¶ 6.

[56] Following an informal conference held on May 10, 2001, with the Kentucky PSC, during which the PwC report was discussed, BellSouth requested that PwC perform a statistically based evaluation of the time it takes to input orders in DOE versus SONGS along with an analysis of downstream errors. *See Stacy Aff.* ¶ 683 & Exh. OSS-87. PwC has completed this evaluation and resubstantiated BellSouth's original assertion that there are no material performance differences in DOE and SONGS. *See id.* ¶¶ 683-686.

pass" philosophy, KPMG evaluated BellSouth's OSS based on more than 1,170 evaluation criteria in eight functional areas. *See Stacy Aff.* ¶¶ 10, 442. The results for each criterion fell into one of five categories: satisfied, not satisfied, not complete, no result, or not applicable. *See id.* ¶ 442. KPMG found that BellSouth had satisfied 95.5% of the evaluation criteria, while finding only 1.8% not satisfied.[57] *See id.* In the test categories of pre-ordering, billing, maintenance and repair, capacity management, change management and flow through, KPMG concluded that BellSouth had satisfied 100% of the evaluation criteria. *See id.*; Letter from Michael W. Weeks, KPMG Consulting, to Leon Bowles, GPSC, at 1 (Mar. 20, 2001) ("KPMG Mar. 20, 2001 Letter") (App. F – Ga., Tab 76).

In the areas of ordering and provisioning, KPMG found all evaluation criteria satisfied except for those in three areas: timeliness of responses to fully mechanized orders, timeliness and accuracy of clarifications to partially mechanized orders, and accuracy of service orders. KPMG Mar. 20, 2001 letter at 2. The "not satisfied" criteria in these areas can be examined in two groups. *See Stacy Aff.* ¶ 444. For some, as a result of changes to BellSouth's OSS and processes, there is now commercial data – unavailable at the time of the KPMG test – demonstrating the sufficiency of BellSouth's OSS. *See id.* Because these commercial data demonstrate that BellSouth is currently performing at a level that provides nondiscriminatory access, KPMG's findings on these criteria are less significant. *See id.* Second, there is a group of criteria related to the accuracy of partially mechanized orders. *See id.* ¶ 445. BellSouth believes that KPMG's interpretation of the test data for order accuracy tends to overstate the actual customer impact by counting an LSR as wholly incorrect if one of the multiple items on

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[57] KPMG found that 1.5% had no result, and 0.3% were not applicable. Also, 11 criteria (0.9%), all relating to performance measurements, remain not complete. *See Stacy Aff.* ¶¶ 442,

the LSR is incorrect, rather than assessing the impact of the one error in the context of the other items. *See id.*[58]

Overall, KPMG found that 21 evaluation criteria were not satisfied. Taken in the context of the entire scope of services and processes that BellSouth provides to CLECs, these 21 exceptions represent a very minor portion of the total services provided each month and do not materially impact the CLECs' ability to provide service. *See Stacy Aff.* ¶ 447. KPMG further noted the GPSC's ability "to monitor these issues on an ongoing basis through the performance measures and/or penalty plans in place." KPMG Mar. 20, 2001 Letter at 2.

Moreover, BellSouth has taken KPMG's identification of "not satisfied" criteria seriously and has conducted an extensive analysis of each such criterion. The results of this analysis, and the steps BellSouth has taken to address those problems, are set forth in detail in the affidavit of William Stacy. *See Stacy Aff.* ¶¶ 464-530. For example, as a result of an exception opened with respect to BellSouth's timeliness in returning Firm Order Confirmation ("FOC") and reject notices for mechanized UNE-P orders via EDI, BellSouth upgraded the infrastructure of EDI to shorten its response time capability. *See id.* ¶¶ 464-469; KPMG Consulting, *BellSouth Telecommunications, Inc. OSS Evaluation – Georgia: Master Test Plan – Final Report* at III-B-5 & III-B-6 (Mar. 20, 2001) ("MTP Final Report") (App. F – Ga., Tab 76) (noting Ordering and

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446, 531-532.

[58] For example, if KPMG tested ten LSRs, and found errors in eight of those orders, KPMG could count each LSR as wholly incorrect, resulting in an overall accuracy rate of 20%. *See Stacy Aff.* ¶ 445. If KPMG were to count the single error as one error out of a total of 15 items for each order, the accuracy rate for these orders would be 94.7%. *See id.* BellSouth believes that the second method more accurately states end-user customers' experience with the service delivered, and thus is more indicative of the scope of the issue. *See id.* Moreover, the customer's perception of their experience is more suitably determined by looking at BellSouth's performance with respect to invoice accuracy. *See id.* And as explained below, the metrics for

Provisioning ("O&P") 3-3-1 and 4-3-1). Data collected after this upgrade showed that BellSouth is returning 100% of functional acknowledgments within 30 minutes for EDI. *See id.* ¶ 467.

In sum, BellSouth has addressed KPMG's concerns and, where necessary, has implemented process improvements to ensure future compliance, such as software changes and retraining of BellSouth personnel. *See id.* ¶¶ 464-530. Moreover, as both BellSouth's performance data and the statistics showing significant CLEC entry in Georgia and Louisiana demonstrate, BellSouth is providing a level of service that gives CLECs a meaningful opportunity to compete in the local market.[59]

BellSouth notes that some CLECs may take issue with the third-party test on the grounds that KPMG's experience is not truly reflective of what CLECs experience. Of course, there will always be some differences in this regard. *See Stacy Aff.* ¶ 448. For example, with a normal CLEC, there is a constant dialogue that occurs between the BellSouth representatives and managers working on the CLEC's orders, and employees of the CLEC. *See id.* ¶ 450. The third-party test did not always include this type of daily interaction. *See id.* Rather, KPMG communicated its concerns by issuing exceptions. *See id.* In response to the exceptions, BellSouth was expected to take management action to provide additional training, change its

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invoice accuracy demonstrates that the actual customer impact of these types of BellSouth errors is quite low. *See id.*

[59] CLECs have also raised issues in state 271 proceedings concerning exceptions and observations in the third-party test in Florida. *See Stacy Aff.* ¶ 595 Specifically, CLECs have made a number of generalizations in which they allege that many of the exceptions satisfied in the Georgia test were then reopened in the Florida test. *See id.* ¶ 597. As explained in the affidavit of William Stacy, these statements are wrong when applied to many exceptions, and misleading as applied to others. *See id.* ¶ 597. Moreover, CLECs have implied that differences in the Georgia and Florida third-party tests somehow makes the Georgia test invalid. *See id.* ¶ 598. But third-party tests need not follow a "cookie-cutter" pattern. *See id.* KPMG completed and concluded the test in Georgia based on the scope of the test as ordered by the Georgia PSC,

practices, and take other actions in order to satisfy the concerns raised in the exception. *See id.* Often, particularly in the case of issues raised in the processing of orders in the LCSC, BellSouth responded by providing service representatives with additional training on the issues that were raised, and continued training through the retest process in order to ensure that the issues raised in the exception were addressed. *See id.* In addition, in the normal CLEC experience, the CLEC chooses certain market segments and then focuses its efforts on obtaining customers by providing the same general types of services, for example, the UNE-P. *See id.* ¶ 451. In most instances, the CLEC order patterns become somewhat routine over time. *See id.* However, in the case of the KPMG CLEC, multiple types of orders were submitted, using multiple customer scenarios. *See id.*

Because of the structure and nature of the testing process, there were certain actions taken by BellSouth during the test in order to address issues raised primarily through the exception process in order to ensure that adequately trained representatives worked the wide variety of third-party test orders. *See id.* ¶ 452. These actions, however, are not unlike actions BellSouth has taken and continues to take in order to process orders on behalf of other CLECs. *See id.* The affidavit of William Stacy discusses these points in detail. *See id.* ¶¶ 453-463.

c. BellSouth's Systems

BellSouth provides nondiscriminatory access to its OSS in both Georgia and Louisiana for pre-ordering, ordering, provisioning, maintenance and repair, and billing. BellSouth makes available to CLECs electronic interfaces to access BellSouth's OSS. As explained below, there is no doubt that BellSouth's OSS are operationally ready and that BellSouth is providing CLECs

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and the fact that the Florida test differed in scope does not change the validity of KPMG's findings in Georgia. *See id.*

in Georgia and Louisiana with nondiscriminatory access to all five OSS functions in compliance with the Act and Commission orders.

i. Pre-Ordering Functions

Pre-ordering is the exchange of information between BellSouth's systems and the CLEC to assist the CLEC in interacting with its end-user customers.[60] Pre-ordering activities enable the CLEC to submit a complete and accurate service request to BellSouth. BellSouth currently offers CLECs in Georgia and Louisiana their choice of electronic interfaces – TAG, RoboTAG™, and LENS – that provide CLECs with real-time access to the same pre-ordering databases used by BellSouth's retail representatives. *See Stacy Aff.* ¶¶ 30, 33, 44, 193-194; *see also LPSC Staff Final Recommendation* at 45. BellSouth's pre-ordering interfaces allow CLECs to perform the following functions: (1) retrieve customer service records; (2) validate addresses; (3) select and reserve telephone numbers; (4) determine services and features available to a customer; (5) obtain due date availability; and (6) access loop qualification information. *See Stacy Aff.* ¶ 190; *Kansas/Oklahoma Order* ¶ 130.

This Commission has held that a BOC must provide pre-ordering functionality through an application-to-application interface to enable CLECs to "conduct real-time processing and to integrate pre-ordering and ordering functions in the same manner as the BOC." *See Connecticut Order* ¶ 34; *Second Louisiana Order* ¶ 96; *Texas Order* ¶ 148. BellSouth provides CLECs with real-time nondiscriminatory access to the same pre-ordering OSS used by BellSouth's retail

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[60] Pre-ordering generally includes the activities that a carrier undertakes with a customer to gather and verify the information necessary to formulate an accurate order for that customer. It includes the following functions: (1) street address validation; (2) telephone number information; (3) services and features information; (4) due date information; and (5) customer service record ("CSR") information. *See Connecticut Order* App. D ¶ 35 & n.98; *Second Louisiana Order* ¶ 94.

representatives through the industry-standard, machine-to-machine TAG pre-ordering interface. *See Stacy Aff.* ¶¶ 33, 193. TAG, which was developed in response to specific requests from mid-sized and large CLECs, provides a standard Application Programming Interface ("API") to BellSouth's pre-ordering, ordering, and provisioning OSS. *See id.* ¶ 33. TAG is based on Common Object Request Broker Architecture ("CORBA"), which is one of the industry protocols for pre-ordering, and follows the Ordering and Billing Forum ("OBF") guidelines for LSRs. *See id.* ¶ 33.[61] Finally, through TAG, BellSouth provides CLECs with CSR data that are parsed to the same extent as they are received by BellSouth's interfaces. *See id.* ¶¶ 220-224; *see also LPSC Staff Final Recommendation* at 47.

BellSouth also offers the web-based graphical user interface ("GUI") LENS. *See id.* ¶¶ 44, 194. LENS, which has been available since April 1997, is an option for those CLECs that have made the business decision not to integrate pre-ordering, ordering, and provisioning interfaces with their internal OSS. *See id.* ¶¶ 44, 194. Because LENS uses TAG's architecture and gateway, it has TAG's pre-ordering functionality for resale services and UNEs. *See id.* ¶¶ 44, 194. Thus, LENS gives CLECs essentially the same real-time access to pre-ordering OSS as TAG does for CLECs, and as BellSouth's systems do for BellSouth. *See id.* ¶¶ 44, 194.

Commercial usage confirms that BellSouth is providing CLECs with nondiscriminatory access to BellSouth's pre-ordering interfaces. At present, CLECs are using LENS and TAG to

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[61] For CLECs wishing to use TAG for pre-ordering, ordering, and provisioning, but not to develop and maintain their own TAG interface, BellSouth introduced RoboTAG™ in November 1999. *See Stacy Aff.* ¶¶ 40-42. RoboTAG™ is a standardized, web-browser-based interface to the TAG gateway that resides on a CLEC's Local Area Network ("LAN") server and integrates pre-ordering and ordering with up-front editing. *See id.* ¶ 40. Today, six CLECs are using RoboTAG™. *See id.* ¶ 40. Moreover, instead of purchasing RoboTAG™, building an EDI or TAG interface, or developing their own electronic interface, CLECs may also choose one of the solutions developed by third-party vendors. *See id.* ¶ 43.

submit an average of over one million pre-ordering transactions a month. *See id.* Despite these large commercial volumes, TAG and LENS are consistently available when scheduled. Region-wide, between May and July 2001, TAG and LENS were both available over 99.5% of the time they were scheduled to be available – meeting the applicable benchmark. *See Varner Ga. Aff.* ¶ 168; *Varner La. Aff.* ¶ 182 (D.1.1.3; D.1.1.7).

TAG's average response intervals have likewise been solid. There are a total of nine systems that are included in this measure; seven are compared with the retail analog. *See Varner Ga. Aff.* ¶ 171; *Varner La. Aff.* ¶ 185 (D.1.4.1.1 - D.1.4.9.2). During May, June, and July 2001, all but one of the systems met or exceeded the retail analogs. *See Varner Ga. Aff.* ¶ 171; *Varner La. Aff.* ¶ 185. The only system to miss the benchmark was the Hands-Off Assignment Logic/Customer Record Information System ("HAL/CRIS"), which is a BellSouth system used to access CSR data from the Business Office Customer Record Information System ("BOCRIS"). *See Varner Ga. Aff.* ¶ 171; *Varner La. Aff.* ¶ 185. This miss did not deprive CLECs of a meaningful opportunity to compete, however. With respect to the average response interval from the HAL/CRIS system for business and residential orders, the response time for CLECs was 3.60 seconds. *See Varner Ga. Aff.* ¶ 171; *Varner La. Aff.* ¶¶ 184-185.

The average response intervals for LENS were also strong. There are a total of seven systems that are included in this measure and they are compared with the retail RNS and ROS systems. *See Varner Ga. Aff.* ¶ 170; *Varner La. Aff.* ¶ 184. During May, June and July 2001, all but one of the systems met or exceeded the retail analogs. For the HAL/CRIS system, the only system that did not meet the benchmark, a detailed analysis identified a problem in the LENS software that deals with response times from HAL/CRIS. *See Varner Ga. Aff.* ¶ 170; *Varner La. Aff.* ¶ 184. This was corrected in an update release on July 28, 2001, and a detailed analysis